Mysteries of stem cell migration revealed

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CIRM-funded Researchers at the University of California, Irvine published an interesting paper this week that helps explain one mystery - how do transplanted stem cells go to the right place? This is an important issue for diseases such as multiple sclerosis, where transplanted stem cells would have to navigate to the damaged nerves.

In a press release, senior author Thomas Lane (shown in photo) said:

> "Previously, we've seen that adult neural stem cells injected into the spinal column knew, amazingly, exactly where to go. We wanted to find what directed them to the right injury spots."

What the team found is that in mice with an induced form of MS, transplanted neural stem cells responded to signals being sent by inflammatory cells at the site of the damage. The neural stem cells responded to those signals by migrating to the right place and maturing into a type of nerve cell called an oligodendracyte, which could help heel the disease.

According to the press release, three weeks after the initial treatment, 90 percent of the cells had grown into fully formed oligodendrocytes.

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